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The 1996 Federal Financial Institutions Examination Council (FFIEC) Information Systems (IS) Examination Handbook (Handbook) is an interagency guide to assist regulatory examiners in examining information systems operations in financial institutions and independent service bureaus. It contains an overview of information systems concepts, practices, examples of sound IS controls, and FFIEC examination workprograms. It also covers regulatory policies of FFIEC member agencies for use in the examination of information systems. The FFIEC members are the Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, National Credit Union Administration, Office of the Comptroller of the Currency, and Office of Thrift Supervision.

In prior versions of this Handbook, its primary audience has always been identified as the experienced interagency IS examiner. Today, the audience includes: safety and soundness and other specialist examiners within each member agency; new or less experienced IS examiners; and the management of the financial institutions and service bureaus. The Handbook has also been expanded to serve as a:

- Tool for better supervision and examination guidance.
- Training aid for new IS examiners.
- Reference source for the industry under supervision.
- More comprehensive technical reference source.

Most Handbook sections have been reorganized and revised to reflect more accurately the rapidly changing information systems environment. Significant changes include:

- Development of several new narrative chapters and related work programs.
- Additional guidance on IS supervision by risk.
- Inclusion of a General and Administrative section.

- Significant modification of the Handbook's structure and presentation.

The numerous changes and modifications do not represent policy changes for the FFIEC or its member agencies. The Handbook has been updated to address emerging technologies in the financial and technology communities as they relate to IS safety and soundness issues and concerns.

The rapid growth of information systems technologies has caused significant changes in the way that financial institutions process data and information. Microcomputers (PCs) are shifting computing power from the traditional data center or service bureau to user departments. Telecommunications networks are enabling the distribution of IS resources throughout multi-site organizations. As a result, an institution's IS environment may include service bureaus, facilities management sites, in-house data centers, and end-user computers working together to meet its information processing needs. IS controls in each of these areas must be reviewed to ensure the accuracy and reliability of the institution's records and information resources. Examiners are also challenged to keep abreast of emerging and changing IS technologies to understand their risks.

Financial institutions must establish effective internal controls and develop management information systems to safeguard information and measure operating performance and profitability. Regulatory examinations evaluate the internal control systems affecting the integrity, reliability, and accuracy of data, and the quality of the management information systems supporting management decisions.

The examination strives first to identify risks that threaten the safe and sound operations of insured financial institutions. They can include:

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- A catastrophic disaster.
 - Inadequate management information reporting systems.
 - Poor contracts with service bureaus or third party processing vendors.
 - IS conversion failures.
 - Significant applications processed on microcomputers or networks with inadequate controls.
 - Security breaches.
 - Mergers and acquisitions without proper review of IS resources.
 - Legal or regulatory violations.

Risk analyses may also determine that special examinations of software vendors and IS conversions or technology projects are warranted. IS examiners may assist other safety and soundness or compliance examiners in reviewing IS risk areas during non-IS examinations.

Chapter 2 describes the IS Supervision by Risk approach. This approach is an evolving policy area emphasized increasingly by all financial regulatory agencies. The chapter serves as guidance only and is supplemented and supported by FFIEC member agency specific policy issuances. This approach is intended to ensure that agency supervisory resources are applied appropriately to supervisory areas of concern based on the degree or level of risk.

This Handbook is being printed as two volumes. A companion package of four disks supporting the Handbook is being mailed separately to holders of the Handbook.

- **Volume 1** includes **Sections I and II** and covers the purpose of IS examinations; the IS control structure; and guidance to IS examiners and the workprogram steps for an IS examination or review.
- **Volume 2** includes **Sections III and IV** and covers the reference material that support the IS supervisory

process.

Occasionally a reference appears in the Handbook to a particular manufacturer or corporation. They are not endorsements of those organizations or products.

This Handbook and the accompanying disks will continue to be updated biannually to reflect changing information systems technologies and regulatory agency guidance.

Several FFIEC member agencies have also established Internet home pages which may be referenced going forward to access evolving agency IS policies. Member agency Internet home page addresses are noted following the title page (page iii) of this Handbook.